

# Chapter 1:

## Using Standards-Based Education to Raise the Bar

Consider this scenario:

*A dozen men and women are seated around a conference room table for a weekly meeting. A casually dressed young man stands before an easel, recording statistics and notes as the group wrestles with the challenges of meeting the company's standard for production of an electrical component. Numbers go up on the flip chart. The group is about 10 percent short of its goal. There is some technical discussion. Then options related to work coordination, ways to change the manufacturing process, scheduling, and so on are presented by each team member.*

*None of the team members are managers. They are hourly employees at a General Electric plant engaged in "knowledge work"—the work of planning, supervising, scheduling, and managing—as part of their job description.<sup>1</sup>*

### Education and the Economy

General Electric's team approach to knowledge work is one example of how companies are restructuring as America shifts to a new version of the global economy.<sup>2</sup> This shift is a major adjustment in the way America works—it is more than a blip on the economic scene. Indeed, Alan

Greenspan, chair of the Federal Reserve Bank under Democratic and Republican administrations, characterizes this economic shift as a “once-in-a-century event” that is changing the very nature of work.<sup>3</sup> The economic impact of this shift is comparable to that of the Industrial Revolution.<sup>4</sup> California’s education and training systems must be expanded and *radically* reformed to take full advantage of the potential of this economic revolution. A well-educated workforce is both a corporate priority and a necessity for expanding the ranks of high- and middle-wage workers.<sup>5</sup>

An expanded and radically reformed education system that produces a well-educated workforce will have at least two effects:

- Such a system will keep California competitive in the global economy.
- Individual graduates will have the opportunity to earn decent wages.

Education clearly is the key to students’ economic survival in California’s emerging “hourglass” economy, an economy characterized by growing wealth concentrated in the hands of a relatively small group while workers in the middle and lower wage ranges continue to experience a real erosion in income.<sup>6</sup>

Current California employment projections testify to this acceleration of the hourglass economy. Within the next decade the vast majority of jobs will require postsecondary training or education, and the remaining handful will be low-skill, low-pay jobs.<sup>7</sup> Even in the period 1999–2001, 34 percent of new jobs created required at least a bachelor’s degree,<sup>8</sup> and 90 percent required more than a high school level of literacy and mathematics skills.<sup>9</sup>

Preparing youths in California to compete for the increasing numbers of high-skill, high-wage jobs presents a significant challenge to educators. Consider, for example, the following demographics:

- About half the children in California live near or below the poverty line.<sup>10</sup>
- One in every four California students—1.48 million—speaks little or no English.<sup>11</sup>

- The rate at which young people in California complete high school (i.e., earn a diploma or pass the GED test) by age 25 is only 80 percent.<sup>12</sup>

These challenges are particularly significant in light of a *projected 40 per-cent enrollment increase* between 1996 and 2008 in California's high schools.<sup>13</sup> Working with these challenges, California high schools must realize the vision of *Second to None*: We must produce young people who know how to think and learn; gather, organize, and analyze information and apply it in solving problems; and work collaboratively with others.<sup>14</sup>

Education should focus on clear, relevant, high standards in both academic content and the thinking and management skills required for new jobs. California now has a standards-based accountability system for education to ensure that every student is prepared to succeed in post-secondary education and careers. The Public Schools Accountability Act of 1999 clearly demonstrates the state's commitment to ensure that each child in California receives a high-quality education based on State Board of Education-adopted content and performance standards "and with a meaningful assessment system and reporting program requirements."<sup>15</sup>

## Education and a Democracy

On November 8, 2000, the nation awoke to discover that a president of the United States still had not been elected. In the weeks of debate that followed, two travesties were clear: the failure of American youths to make the responsible choice to vote at all and the failure of many voters to record their choices effectively. Hours of television interviews revealed that many citizens had not understood the mechanics of the voting process. Some eighteen-year-olds said that they were just too busy to get to the polls or that they had not "studied up on the issues."

As the presidential election of 2000 so dramatically proved, the "education increasingly required" is not just that designed to provide access to good jobs in the hourglass economy. It is also the education that will engage *all* graduates in building the democracy that is the heart of

America. The quality of life in America has depended on citizens availing themselves of freedom and economic opportunity—privileges not enjoyed by the vast majority of the world.

A truly democratic society offers all students the opportunity to learn and excel by providing them with an education that gives them:

- The skills required to do their best to adapt to a changing economy and to maintain California's position in the new global, information economy
- The skills and understanding required to be a contributing member of the community and maintain the democratic process through the exercise of the fundamental rights and responsibilities of citizens

These two skill sets do not exist in isolation; they are interrelated: "Democracy doesn't work with an illiterate population or if some groups are literate and others aren't. . . . Literacy for all and a set of common values that unite rather than divide are the keys to democracy."<sup>16</sup>

Many of the skills sought by business are clearly those that are the cornerstone competencies and personal qualities of a strong democracy.<sup>17</sup>

High standards for student achievement are necessary for two purposes: First, mastery of state content standards is necessary for students to prepare for postsecondary education and careers. Second, students, in the achievement of local outcomes, including content standards, end-of-course outcomes, graduation requirements, and Expected Schoolwide Learning Results (ESLRs), demonstrate the skills, attitudes, and knowledge the community deems essential for productive citizenship. The state's standards, assessment, and accountability system is at the core of local outcomes, making the state and local systems complementary and interdependent.

## Standards-Based Education

Standards are not new to education; educators have always had goals and expected levels of achievement for students. *What is*

*new is the vision of a standards-based educational system in which curriculum, instruction, assessment, and reporting to parents, students, and the public are all aligned to a common set of standards.* [Emphasis added]<sup>18</sup>

Standards are generally divided into two types: content and performance. Content standards define *what* students should know and be able to do. Performance standards are derived from content standards and define *how* or *how well* students must perform. Performance standards set the *level of mastery* expected for the content standards. A student's progress in mastering content standards is measured both statewide and locally.

Statewide tests, such as the *Stanford Achievement Test (Ninth edition)*, *California Standards Tests*, and *California High School Exit Examination (CAHSEE)*, capture a snapshot in time of student mastery of state standards. Local assessments serve as benchmarks of student progress toward meeting state standards. They ascertain ongoing student learning through classroom assessments and end-of-course outcomes. Because local assessments take place across a variety of contexts, they add dimension to the assessment picture. Local assessments integrate academic content with mastery of career-technical education and fine arts standards as well as with ESLRs and other community expectations. Locally developed assessments allow students to demonstrate real-world skills.

Table 1 shows the difference between instruction and assessment in traditional practice and in a standards-based educational system.<sup>19</sup>

Research proves that a standards-based curriculum helps mitigate the "significant achievement gap that exists . . . between rich and poor . . . and among ethnic and cultural groups."<sup>20</sup> Indeed, full implementation of standards-based instruction and assessment was the *most important factor* identified by the Education Trust in a 1999 study. The study identified 366 schools in 21 states that were "high performing" or "most improved" on achievement tests and that had at least 50 percent of the students living at or below the poverty level. "These schools have become places where *all classroom activity is aligned with state standards.*" [Emphasis added]<sup>21</sup>

**Table 1** Instruction and Assessment in Different Educational Systems

Traditional educational system	Standards-based educational system
1. Select a topic from the curriculum.	1. Select and analyze the standard(s) to be met.
2. Design instructional activities.	2. Design or select an assessment through which students can demonstrate mastery of standards; determine the required performance level, if not given.
3. Design and give an assessment.	3. Identify what students must know or be able to do to perform well on the assessment.
4. Give a grade or feedback.	4. Plan and deliver lessons. Provide <i>all</i> students with adequate opportunities to learn and practice the necessary skills or knowledge.
5. Move on to a new topic.	5. Assess students and examine results to plan further instruction or individual support, if needed, and grade their work.

In the same study the Education Trust reports that top-performing, high-poverty schools tend to:

- Increase instructional time in reading and mathematics.
- Devote a larger proportion of funds (than do lower performing schools) to support professional development focused on changing instructional practices.
- Implement comprehensive systems to monitor individual student progress and provide extra support to students as soon as it is needed.
- Involve parents in helping their children meet the standards.
- Have state or district accountability systems that exert real consequences on adults in the schools.

Such changes in education are dramatic at the high school level. They have been compared in magnitude to moving from the one-room schoolhouse to the urban school system.<sup>22</sup> In a traditional education system, “inputs” remained the same while the outcomes for students varied, “mirror[ing] the stratification of society.” However, “in the standards model, the outcomes are held steady and the inputs vary.”<sup>23</sup> This major shift in the educational philosophy has redefined educational equity from system inputs to system outputs, from student access to student performance. Stanford University professor Linda Darling-Hammond states, “We’re trying to get every student to meet standards of learning that we once reserved for those who were streamed off into ‘the gifted and talented’ programs.” And she warns, “You can’t get there by keeping the same system and trying harder.”<sup>24</sup>

## Educational Equity and Opportunity to Learn

The concept of the opportunity to learn was first introduced decades ago by the International Association for the Evaluation of Educational Achievement.

*Opportunity to learn* has been defined in terms of standards, conditions, strategies, and guidelines. Wendy Schwartz, in *Opportunity to Learn Standards: Their Impact on Urban Students*, recommends opportunity-to-learn *strategies* centered on curriculum and instruction, teacher competence, school organization, and ancillary services.<sup>25</sup> Linda Darling-Hammond uses *opportunity to learn* as a broad term that encompasses the following areas:<sup>26</sup>

- Clear, specific standards to guide action, not to restrain teachers
- A curriculum that explores concepts in depth
- Materials supporting teaching for understanding
- Assessments for diagnostic feedback and performance evaluation
- Teacher education programs producing well-prepared classroom leaders
- High-quality, sustained professional development
- Incentives for teacher learning

- Significant extra supports for students
- Longitudinal data systems to track student learning gains
- Redesigned schools

The American Educational Research Association suggests opportunity-to-learn *standards* to address issues of fairness in testing when tests are used for promotion and graduation.<sup>27</sup> The association recommends preparing students for test-taking and providing students with curriculum and instruction, including the appropriate support systems that afford them the opportunity to learn the content and skills that are tested.

## A Look Back, A Look Forward

Since the 1850s educators have prepared students for productive participation in the economy and the community. That mission has not changed, but the global economy has. The future labor market demands a more highly educated populace. As State Superintendent of Public Instruction Delaine Eastin has stated, “In the future there will be two kinds of people: those who are highly educated, and those who are barely employable.”<sup>28</sup>

Educators have promoted goals and expected levels of achievement for students for more than 150 years. That has not changed, but the shift from a topic-driven to a standards-driven educational system is essential to ensure that all students master the knowledge and skills necessary in the twenty-first century. A standards-based educational system begins with the premise that all children can learn and provides the curriculum and instructional methods to ensure that that happens.<sup>29</sup>

Since the nineteenth century educators have addressed issues of educational equity to ensure that *all* students have the opportunity to learn. That has not changed, but now each and every student needs to master the content knowledge and attain the skills necessary for future success in the workforce and the democracy. As Lauren Resnick points out, “It is not new to include thinking and problem solving in *someone’s* curriculum; it is new to include it in *everyone’s* curriculum.”<sup>30</sup>



The challenges that educators face today are not new. The needs outlined in *Second to None* appear to be as appropriate today as they were in 1992:

We need to engage our students in a strengthened curriculum; prepare more students for college and . . . technical preparation programs and jobs; develop outcome-based accountability; provide effective support and reduce the dropout rate; establish an environment of professionalism for school faculty; initiate effective parent, business, and community involvement; and make instructional and organizational changes to allow students to reach these higher levels.<sup>31</sup>

The themes of *Second to None* are evident in high schools across the state; schools are focusing on developing powerful teaching and learning, establishing massive accountability systems, and providing comprehensive support for *all* students. To do so they have chosen to restructure and redefine professional roles and to create curricular paths to success.

Yet much has changed since 1992. Participation in California's twenty-first century economy now clearly depends on mastery of rigorous standards. Therefore, California, like the rest of the nation, is concentrating more intense, even laserlike efforts on ensuring that *all* students have the opportunity to master high academic and supplementary standards, including career-technical education standards, that prepare them for success in postsecondary education, careers, and productive citizenship.

## Notes

1. Thomas A. Steward, *Intellectual Capital*. New York: Doubleday Publishers, 1997, p. 38.
2. California Economic Strategy Panel, *Collaborating to Compete in the New Economy: An Economic Strategy for California*. Sacramento: Trade and Commerce Agency, 1996.
3. Alan Greenspan, "Job Insecurity and Technology." Address given before the Federal Reserve Bank of Boston's Conference on Technology and Growth, June 1996.
4. Karen Levesque and others, *Vocational Education in the United States: Toward the Year 2000*. Washington, D.C.: U.S. Department of Education, National Center for Educational Statistics, 2000.
5. Joel Kotkin and John M. Olin, *Business Leadership in the New Economy: Southern California at a Crossroads*. Claremont, Calif.: La Jolla Institute, 1998, p. 35.

6. Chris Benner, Bob Brownstein, and Amy B. Dean, *Walking the Lifelong Tightrope: Negotiating Work in the New Economy*. San Jose, Calif.: A joint publication of the Working Partnerships USA and the Economic Policy Institute, 1999. Available on the Web site <<http://www.atwork.org/wp/tig/Tightrope.pdf>>.
7. California Employment Development Department, "California—Occupational Employment Projections, 1998–2008." Available on the Web site <[http://www.calmis.cahwnet.gov/file/occproj/cal\\$tb6.htm](http://www.calmis.cahwnet.gov/file/occproj/cal$tb6.htm)>.
8. National Alliance of Business, "The Multifaceted Returns to Education," *Workforce Economics Trends*, No. 1 (June 1998), 1.
9. *The Formula for Success: A Business Leader's Guide to Supporting Math and Science Achievement*. Washington, D.C.: Business Coalition for Education Reform, 1999. Available on the Web site <<http://www.bcer.org/timss/>>.
10. Robert C. Fellmeth, "The Road Not Taken: Our Children," *The Sacramento Bee*, October 3, 1999. Forum, 1, 4.
11. Data are available on the Web site <<http://www.npg.org/states/ca.htm>>.
12. "Educational Attainment of the Population 25 Years and Over, by State, Including Confidence Intervals of Estimates." Washington, D.C.: U.S. Census Bureau, 1999. Available on the Web site <<http://www.census.gov/population/socdemo/education/p20-528/tab13.pdf>>.
13. Debra E. Gerald, "Public Elementary and Secondary Enrollment," in *Projections of Education Statistics to 2009*. Washington, D.C.: National Center for Education Statistics, 1998. Available on the Web site <<http://www.nces.ed.gov/>>.
14. *Second to None: A Vision of the New California High School*. Report of the California High School Task Force. Sacramento: California Department of Education, 1992, p. 5.
15. Public Schools Accountability Act of 1999, *Education Code* Section 52050.5(b).
16. James R. Brown, "The Challenge of Change: Reinventing High School." Keynote address given before the Improving America's Schools Conference Institute, Sacramento, California, September 19, 2000.
17. *What Work Requires of Schools: A SCANS Report for America 2000*. Washington, D.C.: The Secretary's Commission on Achieving Necessary Skills (SCANS), U.S. Department of Labor, June 1991. Available on the Web site <<http://wdr.doleta.gov/SCANS/whatwork/whatwork.html>>.
18. *Focus on Learning: Process Guide for Joint WASC Accreditation and CDE Program Quality Review*. Sacramento: California Department of Education, 2001, p. 119.
19. Table 1 is adapted from the work of Kate Jamentz, in *Focus on Learning* (p. 120), and Douglas B. Reeves, *Making Standards Work*. Denver, Colo.: Center for Performance Assessment, 1998.
20. *The High Stakes of High-Stakes Testing*. WestEd Policy Brief. San Francisco: WestEd, 2000.

21. *Dispelling the Myth: High Poverty Schools Exceeding Expectations*. Washington, D.C.: Education Trust, 1999. Available on the Web site <<http://www.edtrust.org/main/reports.asp>>.
22. Linda Darling-Hammond, "Making Relationships Between Standards, Frameworks, Assessment, Evaluation, Instruction, and Accountability," *Restructuring Brief*, No. 21 (November 1999). California Professional Development Consortia. Available on the Web site <[http://www.sonoma.k12.ca.us/Depts/pdc/PDF/brief\\_21.pdf](http://www.sonoma.k12.ca.us/Depts/pdc/PDF/brief_21.pdf)>.
23. Ruth Mitchell, "Focusing on Learning: Change Driven by Standards," *Center X Quarterly*, Vol. 7, No. 1 (Fall 1994), quoted in Kate Jamentz, *Standards: From Document to Dialogue*. San Francisco: Western Assessment Collaborative, WestEd, 1998. Available on the Web site <<http://www.wested.org/cs/wew/view/rs/18>>.
24. Darling-Hammond, "Making Relationships."
25. Wendy Schwartz, "Opportunity to Learn Standards: Their Impact on Urban Students," *ERIC Digest* (1995). Available on the Web site <<http://www.ericae.net/db/edo/ED389816.htm>>.
26. Darling-Hammond, "Making Relationships."
27. *Standards for Educational and Psychological Testing*. Washington, D.C.: American Educational Research Association, 1999.
28. Quoted in Patrick A. Ainsworth, "Policy Alternatives for Increasing the Number of California's Graduating High School Students Having the Essential Employability Skills Necessary to Compete in the New Economy." La Verne, Calif.: University of La Verne, 2000 (dissertation).
29. Reeves, *Making Standards Work*.
30. Lauren Resnick, *Education and Learning to Think*. Washington, D.C.: National Academy Press, 1987.
31. *Second to None*, p. 5.